

the vertical facing of the Bourne Brook which flows through ornamental gardens.

The ♀ did all the work and was seen to enter the hole for 10 to 15 second periods, emerging each time with her beak full of mud which she deposited on top of the low brook wall (level with the grass lawn) on the opposite side. There was a line of mud pellets along the top of the wall for a length of about 12 feet. The ♀ shook her beak vigorously to help in getting rid of the mud. She was watched working hard for nearly 20 minutes and then she went off to have a rest. The ♂ sat near by and chattered encouragement. From time to time, occasionally while the ♀ was still inside, he entered the hole to see how the work was progressing. When the ♀ finally departed he sat scolding for a while endeavouring to get her to return. Then he went off and came back with a piece of green grass which he took into the hole and left there. Lack of time prevented further observations being made.

Comments on the geographical variation in Carols' Penduline Tit *Anthoscopus caroli* (Sharpe) in southern Africa

by W. J. LAWSON

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Within the southern African sub-continental limits three races of this small tit are recognised, these being *A. c. caroli* (Sharpe) 1871: Ovaquenyama, Ovamboland, South West Africa, *A. c. hellmayri* Roberts 1914: Mapagone, north-eastern Transvaal, and *A. c. robertsi* Haagner 1909: Villa Pereira, Boror, Mocambique. (*vide* McLachlan & Liversidge, *Roberts' Birds of South Africa* 1957, p. 281.) As a result of a recent re-assessment of the geographical variation in *Anthoscopus caroli* conducted at the Durban Museum, it would appear as if the characters and distributions of the races as stated in the above reference are inadequate and in need of adjustment.

A. c. caroli (Sharpe) is discernible from the other austral races in southern Africa on the basis of a greyish suffusion on the chest, and a restriction of the buff of the underparts to the abdomen, with no extension of this colour onto the breast. This buff colouration corresponds with the Cream Buff of Ridgway, (*Color Standards and Color Nomenclature* 1912, Pl. XXX). The measurements of sixteen specimens attributable to this race are—6♂♂ wing 53.0–55.0 (54.1), tail 29.0–31.5 (30.2) and 10♀♀ wing 52.0–56.0 (53.8), tail 28.0–31.0 (29.4) mm. *A. c. caroli* occurs in northern South West Africa, southern Angola?, the Caprivi Strip, northern Bechuanaland Protectorate, and the western and central districts of Southern Rhodesia. This distribution is in accordance with that stated by Smithers *et. al* *Check List of the Birds of Southern Rhodesia* 1957, p. 137. For this study nineteen specimens of this race have been examined from western and southern Southern Rhodesia (16) and Bechuanaland Protectorate (3).

In Natal (where it is uncommon), Zululand, eastern and northern Transvaal, north to the south-eastern areas of Southern Rhodesia occurs a markedly different form of *A. caroli* to which the name *A. c. hellmayri* Roberts is applicable. This race is characterised by the buff of the abdomen being appreciably darker than it is in the nominate race, being about Chamois (Pl. XXX), which in this case extends onto the breast.

The measurements of thirteen specimens attributable to this taxon are—7 ♂♂ wing 52.5–57.0 (54.0), tail 27.5–33.0 (30.5); 6 ♀♀ wing 53.5–57.0 (55.1), tail 27.5–31.5 (29.5) mm. In all thirty-eight specimens of this race have been examined, being from south-eastern Southern Rhodesia (24), eastern Southern Rhodesia (2), north-eastern Transvaal (7), Swaziland (2) and Zululand (3). The specimens from the Sabi/Lundi and Mt. Selinda placed as *A. c. robertsi* by Smithers *et. al.* and McLachlan & Liversidge have been examined and are here placed as *A. c. hellmayri* and not the taxon into which they are usually placed.

From the lower Zambesi River valley and southern Nyasaland through Mocambique to the extreme southern Sul do Save with a slight extension westwards along the lower reaches of the Limpopo River as far west as Beit Bridge occurs a markedly pale race of *A. caroli* which I propose to call *A. c. robertsi* Haagner. I have been unfortunate in not being able to examine topotypical material of this race, described on the basis of specimens from Boror, but specimens available from southern Nyasaland, a zoogeographically similar area resemble those available from Sul do Save. A solitary specimen from Feira, on the Zambesi River, is distinctly greyer on the back than the Mocambique specimens, and Mr. M. P. Stuart Irwin of the National Museum of Southern Rhodesia informs me that a specimen from Liwale, Tanganyika Territory, referred to by Grant (*Ibis*, 1947, 288) as being *A. c. robertsi*, is unlike the Mocambique populations and possibly represents some other race. *A. c. robertsi* would appear to be a race characterised by the pale buff flanks, [about Cream Color (Pl. XVI)], being even paler than that of the nominate race from the arid west, with the chest much whiter in which respect it differs from *A. c. caroli* which has a distinctly greyish chest. The measurements of thirteen specimens are 7 ♂♂ wing 50.0–54.0 (52.3), tail 26.0–30.5 (28.8); 6 ♀♀ wing 48.0–53.0 (50.4), tail 27.5–29.0 (28.1) mm. From the measurements it can be seen that *A. c. robertsi* averages smaller in size than either of the other two races. Material has been examined from southern Nyasaland (2), southern Mocambique (10), and the eastern Transvaal (5). This race intergrades with *A. c. hellmayri* at the extreme southern limits of its range in the eastern Transvaal and extreme southern Sul do Save.

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Notes on African Thrushes

PART TWO

by C. M. N. WHITE

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(a) The present notes continue the consideration of the genera of the African *Turdinae*, and genus groups additional to the two already discussed.

A third group may be considered to consist of the Scrub Robins and some allied forms which are characterised by well graduated and rounded tails with well defined white tips to the outer tail feathers. Typically this is